cilia were in active motion. In other respects the animal appeared normal, no changes being observed in its nucleus, protoplasmic contents, or contractile vesicle. Shortly after I had noticed this peculiar rocking movement I found that the elongated extremity was breaking up into small masses of protoplasm; these gradually separated from the parent body, and each of them exhibited distinct amœboid movements. Although the cilia seemed to break off with the small masses, I could not detect any signs of their presence after separation. For about five minutes small protoplasmic masses, exhibiting distinct and independent amœboid movements, continued to be shed.

The rocking movement still continued, but now began to show signs of being converted into a movement of rotation. Finally a rotary motion was established, and the animal began to change its position. At the same time I noticed a distinct elongation occurring at the end where the changes described above had taken place, a rounded projection appearing, which gradually elongated, until finally, in the course of about two hours, the individual had assumed its original shape and activity, although apparently somewhat diminished in bulk. Cilia covered the new growth, but they did not seem to be a new formation, but were produced by a simple elongation of the ectosarc, this being carried forward by the growing endosarc. As regards the protoplasmic masses that were shed or discharged, I observed them for about four hours, at which time they were still active and the parent mass still in active motion. On the following day I was unable to detect them, and as to their subsequent history I know nothing.

To characterize the phenomena as described above, I propose the term "Reproduction by Partial Dissociation." Reproduction by fission, gemmation, conjugation, and encystation have all been observed in the ciliated Infusoria; and some of the older writers, such as Ehrenberg and others, have described a mode of increase, in which the substance of the body breaks up into a number of fragments, each of which is capable of becoming a distinct individual. This process they called diffluence; but Stein and other more recent observers have denied the existence of this process, claiming that it was merely a form of increase from encysted forms. The phenomena as exhibited by *Amphileptus fasciola* seem to be quite different from those described as occurring in diffluence, and it certainly was not a case of encystation. I have been unable to find any account of reproduction in the Infusoria resembling that described above, and I therefore place the facts on record, in order that the attention of other observers may be directed towards the verification of the phenomena and views expressed above.—*Proc. Acad. Nat. Sci. Philad.* 1883, p. 313.

On the Anatomy of Peachia hastata. By M. Faurot.

The Actinia discovered by Gosse (in 1855), and named by him *Peachia hastata*, is known only by its external characters. Hitherto any exact observation of its internal organization has been impos-

sible, owing to the ruptures which take place in its mesenteroid folds. The insensibility produced by water charged with carbonic acid enables chromic acid to act fatally upon the animal without causing contractions and lesions. When thus treated its internal organization differs considerably from that of all known Zoantharia, including *Cerianthus*, which hitherto presented the most exceptional structure.

Twelve perforated mesenteroid folds at the level of the œsophagus. Two of these folds, close together, instead of detaching themselves from the lower margin of the œsophagus, and floating freely in the general cavity, attach themselves to a gutter-like organ, the two margins of which are approximated. This gutter commences on one of the sides of the peristome, appearing externally as a papilliform lip, and terminates in the general cavity not far from an orifice, analogous to that of *Cerianthus*, which the animal possesses at its lower extremity. Eight longitudinal muscular cords project upon the inner wall. These are arranged in pairs, so that only four chambers out of the twelve possess them. These four chambers are placed unsymmetrically, one on each side of the organ above described, the other two opposite one another upon an axis perpendicular to that which would pass through the papilliform lip and the inferior orifice.—*Comptes Rendus*, March 24, 1884, p. 756.

On a Cilio-flagellate Infusorian recently observed in Baltimore Drinking-Water. By C. S. Dolley*.

Having had my attention called to the presence of large numbers of a peculiar minute green organism in the water-supply of the Biological Laboratory, I became interested in identifying the same, and find it to be a species of *Peridinium*. So far as I have been able to ascertain, the only member of the family Peridiniidæ hitherto described as occurring in America is a salt-water species from the coast of South Carolina. After examining the specimens found here, very carefully, and comparing them with the specific descriptions given by Kent, I find that while they agree in most respects with *Peridinium tabulatum*, they also have many points in common with *Peridinium apiculatum*, though differing in several particulars from both. They would therefore seem to constitute an intermediate species, or variety, if, in accordance with Stein, *P. apiculatum* be regarded as only a variety or older phase of *P. tabulatum*. The characters of our Baltimore specimen are as follows:—Body ovate or subglobose, as seen in dorsal or ventral aspect, with a convex dorsal and concave ventral surface as seen in lateral aspect; cuirass composed of numerous polygonal facets, which in the row next to the equatorial furrow are separated by a clear space; the edges of these spaces as well as of the longitudinal and equatorial furrows are finely hispid. The remaining facets are closely united; all the facets have a very marked reticulate structure, with the exception

* Abstract of some remarks before the University Scientific Association, February 6, 1884.